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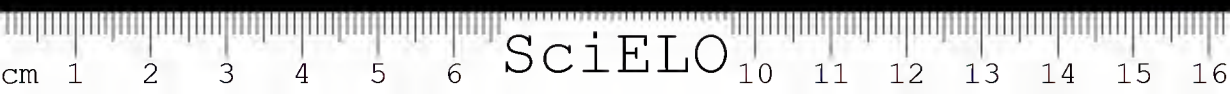
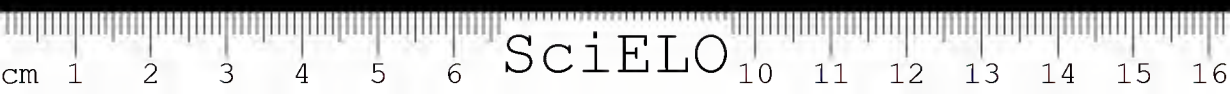
Notes on *Neocapritermes* Holmgren, with description of two new species from the Amazon Basin (Isoptera, Termitidae, Termitinae).

Reginaldo Constantino

Número 8

***Ereymatermes rotundiceps*, new genus and species of termite from the Amazon Basin (Isoptera, Termitidae, Nasutitermitinae).**

Reginaldo Constantino

20 de setembro de 1991

Goeldiana Zoologia
Número 7: 20 de setembro de 1991

Notes on *Neocapritermes* Holmgren, with description of two new species from the Amazon Basin (Isoptera, Termitidae, Termitinae).

Reginaldo Constantino [1, 2]

ABSTRACT - *Neocapritermes pumilis*, sp.n., and *N. unicornis*, sp.n., are described, and drawings of soldier's head and worker's mandibles are presented. New data on the geographical distribution of *N. angusticeps*, *N. araguaia*, *N. bodkini*, *N. braziliensis*, *N.guyana*, *N. opacus*, *N. talpa*, *N. taracua*, *N. utiariti* and *N. villosus* is presented with biological notes.

KEY WORDS: *Neocapritermes*, termites, Isoptera, Termitidae, taxonomy.

RESUMO - *Neocapritermes pumilis*, sp.n., e *N. unicornis*, sp.n., são descritos e desenhos da cabeça dos soldados e das mandíbulas do operário são apresentados. Novos dados sobre a distribuição geográfica de *N. angusticeps*, *N. araguaia*, *N. bodkini*, *N. braziliensis*, *N.guyana*, *N. opacus*, *N. talpa*, *N. taracua*, *N. utiariti* e *N. villosus* são apresentados com notas biológicas.

PALAVRAS CHAVE: *Neocapritermes*, cupins, Isoptera, Termitidae, taxonomia.

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INTRODUCTION

The Neotropical genus *Neocapritermes* was reviewed by Krishna & Araujo (1968), who recognized 14 species, the majority of them known from the Amazon Region. Due to the paucity of collections in this region, there is scarce information on geographical distribution of the species, many of them known only from the type-locality or from a few localities.

The biology of *Neocapritermes* is poorly known. There is no description of nests in the literature and the subterranean habit seems to be dominant in the genus. They are generally found in or under fallen logs, under stones or in epigeal, earthen nests built by other species. *N. braziliensis* seems to be an exception and builds independent epigeal or arboreal nests.

Based on new material recently collected in the Amazon Region, here I present new data on geographical distribution of *Neocapritermes* species and the description of two new species. All the material examined is deposited in the collection of the Museu Paraense Emílio Goeldi (MPEG). Each number listed corresponds to the catalog number of one lot, equivalent to one sample, deposited in the MPEG collection. The complete references on the species descriptions are in Krishna & Araujo (1968). The geographical coordinates of the localities mentioned in this paper are listed in Table 1.

Neocapritermes pumilis, sp.n.
Figs. 1 & 2

HOLOTYPE SOLDIER, two soldier paratypes and 18 worker paratypes - BRAZIL. **Pará State.** Belém, MPEG 3360, 30.VIII.1989, R. Constantino col..

PARATYPES - BRAZIL. **Amazonas State.** Humaitá, MPEG 3737, 15.IX.1990, R. Constantino col., two soldiers and one worker.

ALATES - Unknown.

SOLDIER - Head elongated with sides straight and parallel; slight constriction behind antennae. Labrum short, anterior margin almost straight.

Mandibles strongly curved and twisted. Apex of left mandible blunt. Apex of right mandible slender in profile. Antennae with 15 segments, first the longest one, second longer than third, fourth and fifth shortest. Anterior margin of pronotum strongly emarginate (not visible in the drawing because it was maden in dorsal view); posterior margin rounded. Metanotum with a slight incision on posterior margin. Head capsule with numerous short bristles on top and sides. Labrum with one bristle in the middle of anterior margin. Postmentum with few bristles on anterior portion. Pronotum with bristles on margins and a few ones on surface. Meso and metanotum with bristles on posterior margin. Legs with scattered hairs and bristles. Middle tibia with two or three spines on outer margin. Tibial spurs 3:2:2. Tergites and sternites with numerous hairs on surface. Sternites with a row of long bristles on posterior margin. Head orange, pronotum and legs yellow, abdomen pale yellow.

WORKER - Head rounded; postclypeus moderately inflated; abdomen elongated. Head yellow white; legs and abdomen whitish. Head with six bristles on top; postclypeus without hairs or bristles; labrum with six medium-sized bristles. Pronotum with numerous short to long bristles. Tergites with scattered medium-sized bristles, more numerous on posterior margin; sternites with scattered short hairs on surface and a row of long bristles on posterior margin. Legs with scattered hairs and bristles; middle tibia with two spines on outer margin. Mandibles as in Fig. 2.

COMPARISONS - Three other *Neocapritermes* species have similar strongly curved mandibles: *N. guyana*, *N. talpa* and *N. talpoides*. *N. guyana* is the closest species and differs by the following: a much deeper incision on posterior margin of metanotum; labrum with a pimple-like projection in the middle of anterior margin; apex of right mandible much thicker in profile; left mandible less curved. *N. talpa* is much larger and has antennae with 16 segments. *N. talpoides* is larger, its mandibles are less curved, and has less numerous bristles on head.

BIOLOGY - The type-material was collected in primary terra firme forests, under fallen logs.

Neocapritermes unicornis, sp.n.
Figs. 3 & 4

HOLOTYPE SOLDIER, three soldier paratypes and 15 worker paratypes - BRAZIL. **Amapá State.** Serra do Navio, MPEG 3282, 02.XI.1989, R. Constantino col..

PARATYPES - BRAZIL. **Amapá State.** Serra do Navio, MPEG 3270, 02.XI.1989, R. Constantino col., one soldier and eight workers. **Amazonas State.** Humaitá, MPEG 3719, 15.IX.1990, one soldier and two workers.

ALATES - Unknown.

SOLDIER - Head capsule elongate with parallel, slightly convex sides. Top of head convex in profile. Left side of distorted postclypeus with a conspicuous, spinelike projection oriented forwards. Fontanelle small, circular. Antennae with 16 segments, first the largest one, second larger than fifth, fourth and third shortest. Anterior margin of pronotum rounded, with a slight median incision; posterior margin without median incision. Posterior margin of metanotum emarginate. Left mandible moderately curved, with clavate apex. Right mandible with outer margin almost straight; under margin almost straight in profile. Labrum constricted in proximal portion; anterior margin almost straight. Head with few bristles, more numerous on sides. Labrum with two bristles on the middle of anterior margin. Postmentum with two bristles on anterior margin. Pronotum with bristles on margins. Meso and metanotum with bristles on posterior margin. Legs with scattered hairs and bristles. Middle tibia with one spine near the middle of outer margin. Tibial spurs 3:2:2. Tergites with short bristles oriented backwards, more numerous near posterior margin, and a row of few long, erect bristles on posterior margin. Sternites with numerous short bristles oriented backwards and a row of long ones on posterior margin. Head orange yellow. Postclypeus chestnut brown. Pronotum and legs yellow. Abdomen pale yellow.

Measurements (in millimeters) of five soldiers from the three colonies: lateral length of head: 2.05-2.11; maximum width of head 1.08-1.11; maximum height of head excluding postmentum 0.86-0.89; length of left mandible 1.80; maximum width of pronotum 0.69-0.72; length of hind tibia 0.78-0.80.

WORKER - Head rounded; postclypeus moderately inflated; abdomen elongated. Head yellow white; legs and abdomen whitish. Head with six bristles on top; postclypeus without hairs or bristles; labrum with four hairs at tip. Pronotum with numerous short to long bristles. Tergites with scattered hairs and short bristles; sternites with numerous hairs on surface and a row of long bristles on posterior margin. Legs with scattered hairs and bristles; middle tibia with one spine on outer margin, distally placed. Mandibles as in Fig. 4.

COMPARISONS - Only three other known *Neocapritermes* species have a spinelike projection on postclypeus: *N. araguaia*, *N. angusticeps* and *N. parvus*. *N. unicornis* is very close to *N. araguaia*, which is larger, has the head proportionally longer, the mandibles more curved in profile, the labrum distinctly three-lobed and wider, the postclypeal projection smaller and more upwards oriented. *N. angusticeps* is larger and has proportionally longer head, with a smaller postclypeal projection. *N. parvus* is larger and has the head proportionally much longer, with a smaller postclypeal projection.

BIOLOGY - This species was collected in primary terra firme forests in rather sound wood on the ground.

REMARKS - *N. unicornis* is distinguished from *N. araguaia* also in terms of ecological habits. *N. araguaia* is commonly found in nests of *Cornitermes* spp. and probably feeds on organic residues in the host termitaria. The worker's mandibles in *N. unicornis* have smaller apical teeth and more developed molar ridges than those of *N. araguaia*.

Neocapritermes angusticeps (Emerson) 1925

MATERIAL EXAMINED - BRAZIL. **Amapá State**. Macapá, MPEG 3158, 3202 and 3247, 17-29.X.1989, R. Constantino col.. Mazagão, MPEG 3190, 20.X.1989, R. Constantino col.. Serra do Navio, MPEG 3277, 2.XI.19989, R. Constantino col.. **Pará State**. Anajás, Marajó Island, MPEG 2362, 10.XII.1982, W.L. Overal col.. Benevides, MPEG 983, 16.IX.1980, R.B. Neto col.; MPEG 990, 17.IX.1980, A.G. Bandeira col.; MPEG 1011, 27.I.1981, A.G. Bandeira col.; MPEG 1157, 26.VIII.1982, A.G. Bandeira col.. Bujarú,

MPEG 514 and 517, 02-03.II.1979, A.G. Bandeira col.. Soure, Marajó Island, MPEG 575, 24.II.1979, P.T. Eremita col..

BIOLOGY - *N. angusticeps* occurs in primary terra firme forests but was collected also in second growth forests and in pastures. It is found in or under fallen logs and in abandoned epigeal, earthen nests built by other species, and apparently feeds on rotten wood on the ground.

DISTRIBUTION - This species occurs in northeastern Amazonia including the Guianas, Trinidad, Amapá State, northeastern Pará State and northeastern Amazonas State. It probably occurs also in northwestern Pará State, but no termite collection is available from this region.

Neocapritermes araguaia Krishna & Araujo 1968

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Manaus, MPEG 048, 24.VIII.1976, A.G. Bandeira col.. Silves, MPEG 248, 03.XI.1977, A.G. Bandeira col.. **Pará State**. Soure, Marajó Island, MPEG 726 and 3471, 22-24.II.1979, P.T. Eremita col.. Tucuruí, MPEG 2007 and 2064, 2-2-2-11.IV.1984, A.G. Bandeira col.; MPEG 2139, 11.IV.1984, M.F. Torres col..

BIOLOGY - *N. araguaia* was previously known only from cerrado vegetation as inquiline of *Cornitermes* spp. but the colonies listed above are from primary terra firme forests and one (MPEG 248) is from second growth forest. It was collected from *Cornitermes* nests and also from rotten logs on the ground.

DISTRIBUTION - This species was previously known only from a few localities in Central Brazil and is recorded here for the first time for the Amazon Region.

Neocapritermes bodkini (Silvestri) 1923

MATERIAL EXAMINED - BRAZIL. **Pará State**. Belém, MPEG 3410, 26.VI.1989, R. Constantino col..

BIOLOGY - No biological information is available in the literature about this species. The colony above was collected in a primary terra firme forest, under the bark of a living tree.

DISTRIBUTION - *N. bodkini* was previously known only from Guyana.

Neocapritermes braziliensis (Snyder) 1926

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Maraã, MPEG 2849, 2852, 2877, 2886, 2896, 2942, 2944, 2988, 12-31.X.1988, R. Constantino col.. **Pará State**. Anajás, Marajó Island, MPEG 2356 and 2360, 7.XII.1982, W.L. Overal col.. Breves, Marajó Island, MPEG 3073, 3074, 3077, 3078, 3087 and 3088, 5-10.VIII.1988, M.B. Martins et al. col.. Oriximiná, MPEG 1364, 06.VIII.1982, A.Y. Harada col.. Parque Nacional da Amazonia, MPEG 384, 390 and 3473, 18-22.VIII.1978, A.G. Bandeira col.. **Roraima State**. Maracá Island, MPEG 454, 19.XI.1978, H.O. Schubart col.; MPEG 1185, 11.V.1981, A.E. Mill col..

BIOLOGY - *N. braziliensis* occurs in primary terra firme forests, but was also found in second growth forests. It builds dark, earthen nests, frequently epigeal, but sometimes at the base of trees. It is found also in rotten logs on the ground.

DISTRIBUTION - This species was previously known only from a few localities in Amazonas State, Brazil, but seems to be one of the most abundant *Neocapritermes* species in Amazonia.

Neocapritermes guyana Krishna & Araujo 1968

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Humaitá, MPEG 3724, 15.IX.1990, R. Constantino col..

BIOLOGY - This colony was collected in a primary terra firme forest under a fallen log. Only a few soldiers and workers were found.

DISTRIBUTION - This species was previously known only from the type-locality in Guyana.

Neocapritermes opacus (Hagen) 1858

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Humaitá, MPEG 3727, 3733 and 3801, 15-20.IX.1990, R. Constantino col.. **Pará State**. Bujarú, 12.V.1978, A.G. Bandeira col.. **Rondonia State**. Ji-Paraná, MPEG 2211, 12.VIII.1984, R.B. Neto col.. Ouro Preto do Oeste, MPEG 2222, 18.VIII.1984, R.B. Neto col..

BIOLOGY - This species occurs in a wide range of habitats including cerrado, primary and second growth forests. Its nest is subterranean and it is found foraging in or under fallen logs.
DISTRIBUTION - *N. opacus* has a wide distribution in South America, including Ecuador, Bolivia, Argentina, Paraguay and central-southern and northeastern Brazil. The colonies listed above are the first records of this species for Brazilian Amazonia.

Neocapritermes talpa (Holmgren) 1906

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Humaitá, MPEG 3707, 3728, 3729 and 3731, 14-15.IX.1990, R. Constantino col.. **Rondônia State**. Ji-Paraná, MPEG 2202, 10.VIII.1984, R.B. Neto col..

BIOLOGY - *N. talpa* occurs in primary terra firme forests in diffuse subterranean galleries and was found foraging under fallen logs.

DISTRIBUTION - This species was previously known only from a few localities in Peru, Colombia and Bolivia and is recorded here for the first time for Brazil. *N. talpa* seems to be restricted to western Amazonia although much new collecting is necessary to define the actual distribution of this species.

Neocapritermes taracua Krishna & Araujo 1968

MATERIAL EXAMINED - BRAZIL. **Amapá State**. Macapá, MPEG 3246, 29.X.1989, R. Constantino col.. Mazagão, MPEG 3181 and 3192, 20.X.1989, R. Constantino col.. Serra do Navio, MPEG 3265, 02.XI.1989, R. Constantino col.. **Pará State**. Parque Nacional da Amazônia, MPEG 387, 419, 3472 and 3489, 18.VIII.1978, A.G. Bandeira col..

BIOLOGY - No biological data are available in the literature. This species occurs in primary terra firme forests, but was also collected in pastures and in second growth forests. It is found in or under rotten, fallen logs or, less frequently, in abandoned epigeal nests built by *Cornitermes* spp. Sometimes it builds earthen structures in or under rotten logs, with large cells with smooth inner surface.

DISTRIBUTION - *N. taracua* was previously known from a few localities in Amazonas and Roraima States, Brazil, and the material listed above represents the first records of this species for Pará and Amapá States.

Neocapritermes utiariti Krishna & Araujo 1968

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Humaitá, MPEG 3665 and 3671, 12.IX.1990, R. Constantino col.. **Pará State**. Benevides, MPEG 981 and 987, 16-17.IX.1980, R.B. Neto col..

BIOLOGY - *N. utiariti* occurs in primary terra firme forests. It is found in or under fallen, rotten logs or in epigeal, earthen nests built by other species. This species is the largest sized in the genus.

DISTRIBUTION - This species is known only in Brazil, from a few localities in central and eastern Amazonas State, northern Mato Grosso State and eastern Pará State.

Neocapritermes villosus (Holmgren) 1906

MATERIAL EXAMINED - BRAZIL. **Amazonas State**. Humaitá, MPEG 3706, 14.IX.1990, R. Constantino col..

BIOLOGY - The colony above was collected in a primary terra firme forest under a fallen log. Holmgren (1906) mentioned that *N. villosus* occurs in areas with stones or many roots where no other species can dig and that *N. talpa* is restricted to areas with soft soil. This was not verified, and both species were collected in the same terra firme forest where no variation in the soil type was observed.

DISTRIBUTION - Previously known only from one locality in Peru and another in Ecuador. This is the first record of this species for Brazil.

ACKNOWLEDGEMENTS

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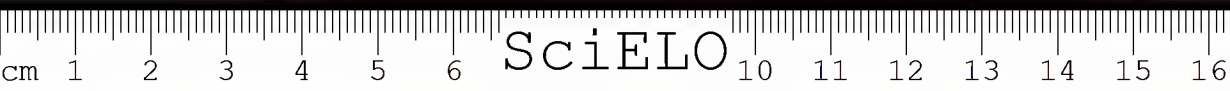
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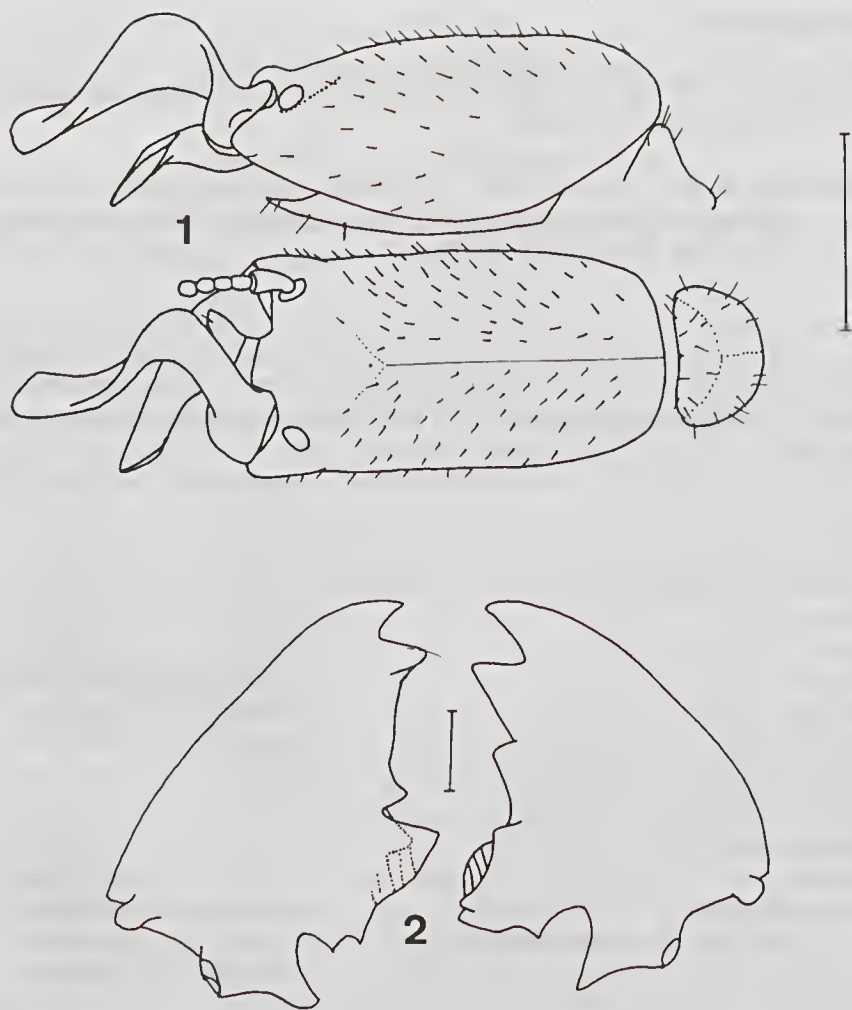
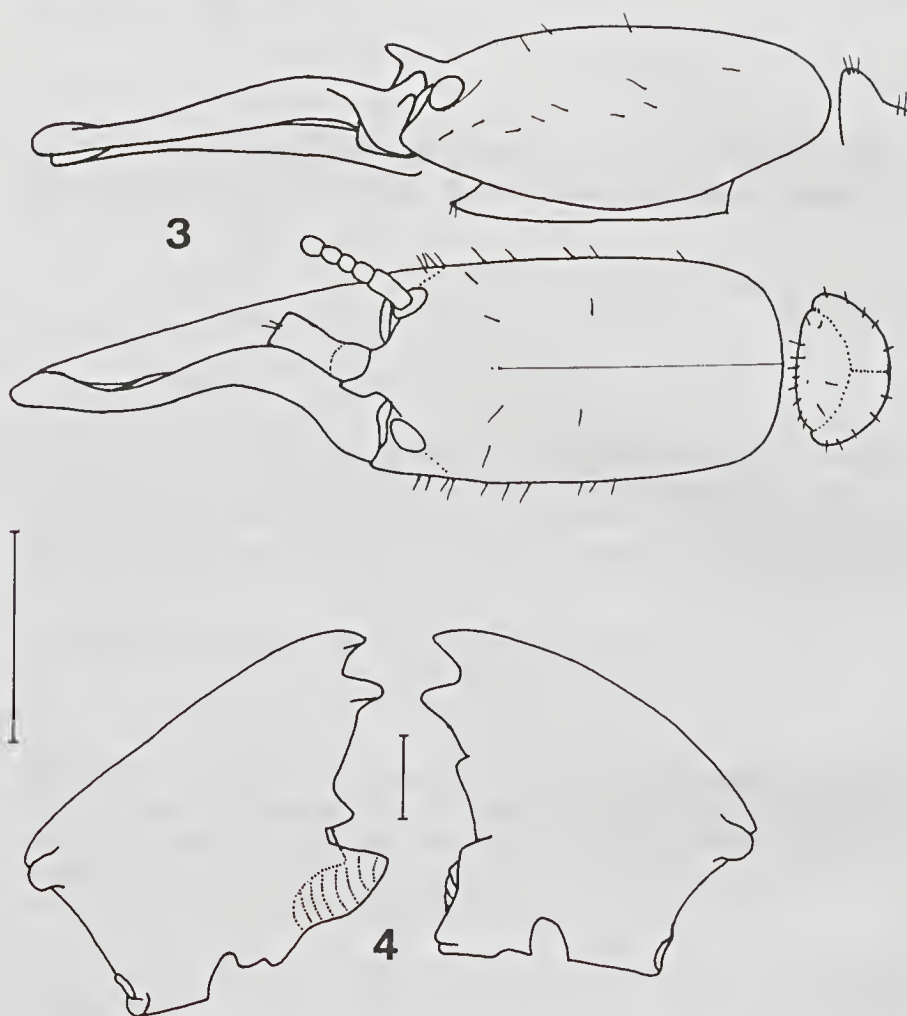
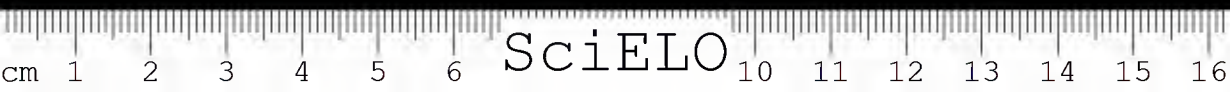
Table 1 - Geographical coordinates of the Brazilian localities mentioned in this paper.

Locality	Latitude	Longitude
Anajás - PA	01°00'S	49°56'W
Belém - PA	01°27'S	48°28'W
Benevides - PA	01°29'S	48°13'W
Breves - PA	01°39'S	50°28'W
Bujaru - PA	01°32'S	48°01'W
Humaitá - AM	07°31'S	63°01'W
Ji-Paraná - RO	10°50'S	61°56'W
Macapá - AP	00°02'N	52°32'W
Manaus - AM	03°07'S	60°01'W
Maraã - AM	01°51'S	65°27'W
Maracá Island - RR	03°27'N	61°21'W
Mazagão - AP	00°08'N	51°18'W
Oriximiná - PA	01°46'S	55°51'W
Parque Nacional da Amazônia - PA	04°20'S	56°40'W
Serra do Navio - AP	01°00'N	52°04'W
Silves - Faz. Aruanã - AM	03°04'S	58°45'W
Soure - PA	00°43'S	48°31'W
Tucuruí - PA	03°43'S	49°41'W

Figures 1-2

Neocapritermes pumilis, sp.n.
1. soldier's head; 2. worker's mandibles. Scales = 1.0 mm for soldier and 0.1 mm for mandibles.

Figures 3-4

Neocapritermes unicornis, sp.n.
3. soldier's head; 4. worker's mandibles. Scales = 1.0 mm for soldier and 0.1 mm for mandibles.

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Número 8: 20 de setembro de 1991

Ereymatermes rotundiceps, new genus and species of termite from the Amazon Basin (Isoptera, Termitidae, Nasutitermitinae)

Reginaldo Constantino [1, 2]

ABSTRACT - *Ereymatermes rotundiceps*, a new genus and species of termite collected in primary swamp forest at Jaraqui Island, Japurá Rive , near the town of Maraã, Amazonas State, Brazil is described. Drawings of imago head and mandibles, soldier head, and worker mandibles and digestive tube are presented.

KEY WORDS: termites, taxonomy, Isoptera, Termitinae, *Ereymatermes*.

RESUMO - *Ereymatermes rotundiceps*, novo gênero e nova espécie de cupim coletado numa floresta primária de várzea na Ilha Jaraqui, rio Japurá, próximo à cidade de Maraã, Amazonas, Brasil, é descrito. São apresentados desenhos da cabeça e mandíbulas do imago, da cabeça do soldado e das mandíbulas e tubo digestivo do operário.

PALAVRAS-CHAVE: cupins, taxonomia, Isoptera, Termitinae, *Ereymatermes*.

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INTRODUCTION

The soil-feeding nasute termites of the Neotropical Region are poorly known due mainly to the small size and subterranean habits of the majority of the species. They are, in general, rare in collections. In addition to their subterranean habits, these termites have in common the following: worker mandibles with a large apical tooth; molar ridges reduced or absent; soldier mandibles vestigial without points (except *Angularitermes*, which has distinct points); slow-moving soldiers and workers.

Although they have several common characteristics, the soil-feeding nasutes seem to be a polyphyletic group; these similarities are probably due to convergence related to common habits. Fontes (1979, 1982, 1987a, 1987b) studied the Neotropical species of this group of termites, established four new genera, and recognized four distinct patterns in the digestive tube of 14 Neotropical and Ethiopian genera.

As a result of intensive collecting that I am conducting in the Amazon Region, several new taxa of this group of termites have been discovered (Constantino 1990a; b). In this paper a new genus and species of soil-feeding nasutes from the forest of the lower Japurá River, Amazonas State, Brazil is described. The terminology used in this paper for the mandibles and digestive tube is the same as in Fontes (1987a; b), and the terms "worker with narrow gap" and "worker with wide gap" are used for the dimorphic worker caste.

Ereymatermes, gen. n.

TYPE SPECIES - *Ereymatermes rotundiceps*, sp.n.

IMAGO - Head rounded. Fontanelle medium-sized, elongated and slightly forked at tip. Eyes very large, bulging. Ocelli large and oval. Postclypeus about twice as broad as long, with midline visible and inflated in profile. Pronotum trapezoid-shaped, narrower than head and with rounded angles. Antennae with 15 segments. Mandibles similar to the worker with narrow gap but the inner margins of the apical teeth are more straight. Head with few long bristles and numerous short ones. Tibial spurs 2:2:2.

SOLDIER - Head capsule broad and rounded, without constriction. Nasus thin, long, conico-cylindrical and slightly oriented upward in profile. Labrum small, much broader than long, with sides rounded and oriented forward. Vestigial mandibles without points. Antenna with 12 segments. Pronotum much narrower than head. Head and nasus with numerous microscopic hairs. Tibial spurs 2:2:2.

WORKER - Dimorphic.

Worker with narrow gap (more frequent worker type)[3]. Left mandible: angle between apical tooth and first plus second marginal tooth acute; cutting edge of first plus second marginal tooth almost straight; distinct third marginal tooth; molar tooth hidden beneath the molar prominence. Right mandible with apical tooth greater than first marginal; second marginal tooth small; distance between second marginal and molar plate greater than distance between first and second marginals. Digestive tube: crop voluminous; gizzard with weakly sclerotized armature, without spines; mixed segment short, ventrally placed; malpighian tubules enlarged at base, insertion as in Fig. 18; first proctodeal segment cylindrical, shorter than mesenteron; enteric valve ventro-laterally placed; the armature (Fig. 13) consists of six equal sclerotized swellings (only two represented in figure) with numerous large spines arranged in a bowed line, paired longitudinally with six dome-shaped swellings with approximately five spines (below in the figure); rectum voluminous; coiling as in Figs. 14-17.

Worker with broad gap (less frequent worker type). Recognizable only by the left mandible, which has a greater distance between the third marginal tooth and the molar prominence; a small, but distinct, extra tooth between the third marginal and the molar prominence; and a smaller molar prominence.

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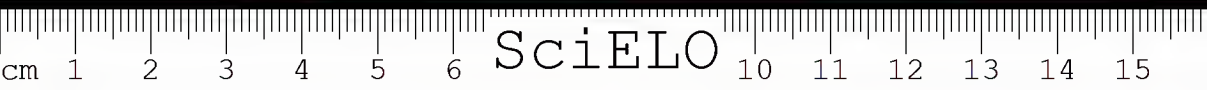
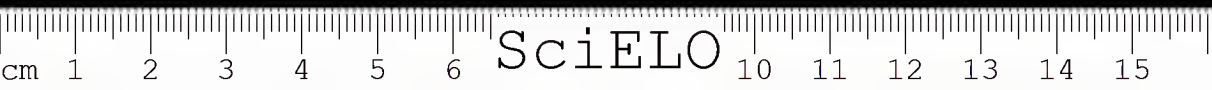
[3] Five workers out of seven examined were "narrow gap". No more specimens were examined because it is necessary to remove the mandibles.

COMPARISONS WITH OTHER NEOTROPICAL SOIL-FEEDING NASUTE GENERA

The closest genera are *Agnathotermes*, *Araujotermes*, *Atlantitermes*, *Coatitermes*, *Convexitermes* and *Subulitermes*, which have in common a dimorphic worker caste recognizable only by the mandibles and rather similar external morphology of the alates. *Ereymatermes* can be distinguished from these genera by the presence of a short mixed segment, a well-sclerotized enteric valve armature with six equal swellings (all other genera have two sizes of swellings arranged in a trilateral symmetry), large apical tooth on mandibulae (only *Agnathotermes* has a larger left mandible index) and a small extra tooth between the third marginal and the molar prominence in the left mandible of alates and of workers with broad gap. Other differences are listed below.

Agnathotermes. Alate: eyes and ocelli smaller; head, pronotum and labrum with only short hairs; top of head straight in profile. Soldier: head narrower, with a constriction behind antennae; nasus broad and conical. Worker: mandibles with larger apical tooth; cutting edge of first plus second marginal tooth concave; enteric valve armature with only large spines, not arranged in a line.

Araujotermes. Alate: narrower head with smaller eyes; pronotum longer; numerous long bristles on head and pronotum. Soldier: head elongated, pear-shaped, with numerous long bristles and without microscopic hairs; nasus forward oriented. Worker: third marginal tooth of left mandible more prominent; cutting edge of first plus second marginals sinuous; enteric valve armature weakly sclerotized, with only short spines.

Atlantitermes. Alate: very close and difficult to distinguish from *Ereymatermes*; smaller eyes and shorter and less inflated postclypeus. Soldier: narrower head with constriction behind antennae. Worker: cutting edge of first plus second marginal sinuous; third marginal of left mandible more prominent; molar ridges clearly visible.

Coatitermes. Alate: head and pronotum with longer bristles; fontanelle narrower and strongly forked at tip; eyes smaller, not touching the lower margin of head. Soldier: head narrow with a constriction behind antennae; nasus broad and conical; head with numerous medium to long bristles and without microscopic hairs. Worker: third marginal tooth of left mandible more prominent; enteric valve armature with less numerous spines, not arranged in a line.

Convexitermes. Alate: smaller eyes; smaller and less inflated postclypeus; posterior margin of pronotum rounded. Soldier: nasus broad and conical; head densely covered with short to long hairs. Worker: cutting edge of first plus second marginal tooth sinuous; third marginal of left mandible more prominent; molar ridges clearly visible; enteric valve armature weakly sclerotized with only small spines; pairs of Malpighian tubules fused at their proximal region, attached to a weakly developed mesenteric swelling.

Subulitermes. Alate: smaller eyes; postclypeus shorter and less inflated; pronotum longer, with posterior margin rounded. Soldier: head elongated, pear-shaped; nasus forward oriented. Worker: cutting edge of first plus second marginal tooth sinuous; third marginal of left mandible more prominent; enteric valve armature weakly sclerotized with only a few small spines.

Ereymatermes rotundiceps, sp. n.

ALATES (Figs. 3-5, 7-8) - Males and females (no sexual dimorphism observed in the size and shape of head, pronotum and thorax). Head capsule dark-brown. Pronotum brown. Legs yellow-brown. Wing scales brown. Postmentum pale-brown. Postclypeus brown. Tergites brown. Sternites yellow. Wings chestnut brown. Antenna: second, third and fifth segments equal, greater than fourth. Eye touching the lower line of head in profile. Ocellus oval, close to eye. Fontanelle about same length as ocellus. Posterior margin of meso and metanotum concave or forming an obtuse angle. Pronotum with numerous short bristles and longer ones on margins. Tergites and sternites with many short bristles on the surface and a row of long bristles on posterior margin. Legs with numerous hairs and scattered bristles. Tibiae with numerous spines, a little thicker than bristles, on inner margin.

Measurements (in millimeters) of five alates of type-colony: length of hind wing from suture 7.90-8.55; width of hind wing 2.42-2.66; length of head from apex of postclypeus 0.92-0.93; lateral length of head from base of mandibles 0.77-0.86; width of head including eyes 1.06-1.10; height of head excluding postmentum 0.46-0.49; greatest diameter of eye 0.46; length of pronotum 0.84-0.90; length of hind tibia 1.32-1.38.

Ratios based on the measured alates: length of head including eyes to length of hind tibia 0.79-0.83; length of pronotum to length of hind tibia

0.37-0.41; length of pronotum to width of pronotum 0.56-0.62; width of head with eyes to greatest diameter of eye 2.30-2.39.

SOLDIER (Figs. 1-2) - Head yellow; nasus yellow-brown; antenna yellow; pronotum, mesonotum and metanotum yellowish-white; sclerites transparent. Antenna: third segment greater than second, fourth greater than third, fifth equal fourth. Top of head with sparse medium to long bristles and numerous microscopic hairs. Nasus covered with dense microscopic hairs, becoming longer toward apex. Tergites and sternites with numerous short bristles on surface, and a row of long bristles on posterior margin. Legs covered with numerous hairs and a few bristles. Tibiae with numerous spines, a little thicker than bristles, on inner margin.

Measurements (in millimeters) of five soldiers from type-colony: length of head to apex of postclypeus 0.92-1.00; length of head with nasus 1.54-1.62; height of head excluding postmentum 0.54-0.62; width of head 0.88-0.96; width of pronotum 0.46-0.48; length of hind tibia 0.81.

Ratios based on the measured soldiers: length of head with nasus to width of head 1.69-1.80; length of head without nasus to width of head 1.04-1.09; length of nasus to length of head without nasus 0.62-0.69.

WORKER (Figs. 6, 8-18) - Left mandible index 1.3 - 1.5. Head, antennae and legs pale-yellow. Pronotum yellow-white. Sclerites transparent, yellowish. Head as in Fig. 6. Postclypeus inflated. Chaetotaxy of abdomen and legs similar to that of soldier.

TYPE MATERIAL - Holotype soldier: BRAZIL. Amazonas State, Maraã, Japurá River, Jaraqui Island, 01°51'S 65°27'W, primary swamp forest, 06.Oct.1988, R. Constantino col. (number MPEG 2790 in the collection of the Museu Paraense Emílio Goeldi, Belém, Brazil). Paratypes: soldiers, workers and alates, same data as holotype; and soldiers and workers from colony number MPEG 2788, same data. Part of lot MPEG 2790 deposited in the collection of the Museu de Zoologia da Universidade de São Paulo under number MZUSP 9447 (paratype alates, soldiers and workers).

BIOLOGY - The two known colonies were collected as inquilines in arboreal earthen termitaria built by an undescribed soldierless Apicotermitinae.

DISCUSSION

The phylogenetic relationships of the new genus are not clear, although it seems to be related to the other Neotropical genera of soil-feeding nasutes. Some characters are confusing and there is no clear synapomorphy relating *Ereymatermes* with any other genus of the group, but *Angularitermes*, *Anhangatermes* and *Cyranotermes* are clearly distinct.

The enteric valve armature of *Ereymatermes* has six equal swellings (hexa-lateral symmetry) while all the others of the group have three major swellings alternating with three minor swellings (tri-lateral symmetry). The insertion of the Malpighian tubules is similar to that of *Atlantitermes*, *Araujotermes*, *Coatitermes* and *Subulitermes*, but *Ereymatermes* has a short mixed segment, not present in these genera. *Angularitermes*, *Anhangatermes* and *Cyranotermes* have also a short mixed segment, but of different shape.

The dimorphism in the mandibles of the workers is similar to that observed by Fontes (1987b) in *Convexitermes*, *Atlantitermes*, *Araujotermes*, *Coatitermes*, *Subulitermes* and *Agnathotermes*. The origin and biological significance of this dimorphism is unknown, and no other difference was observed between the two types of worker.

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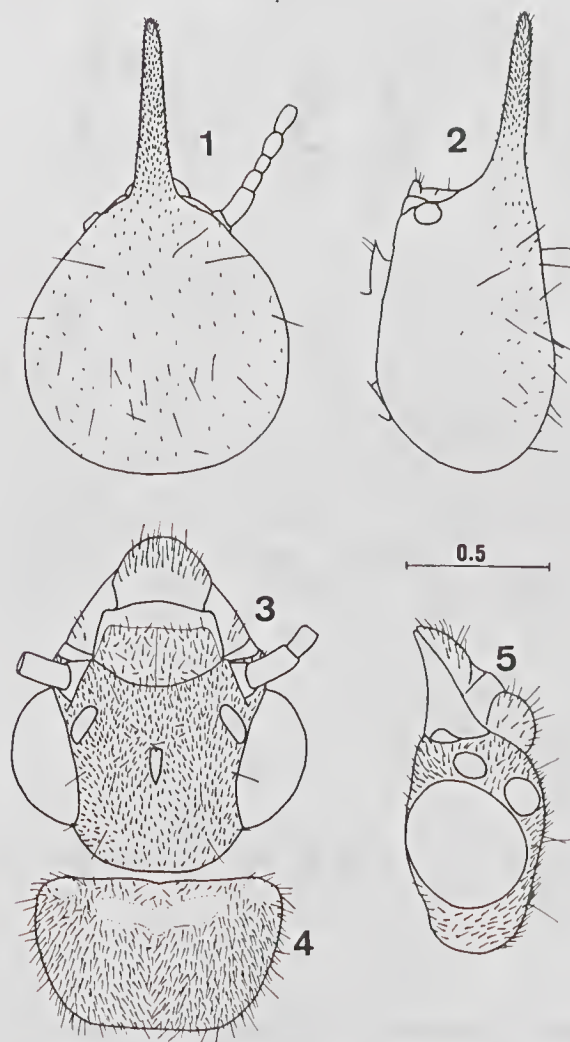
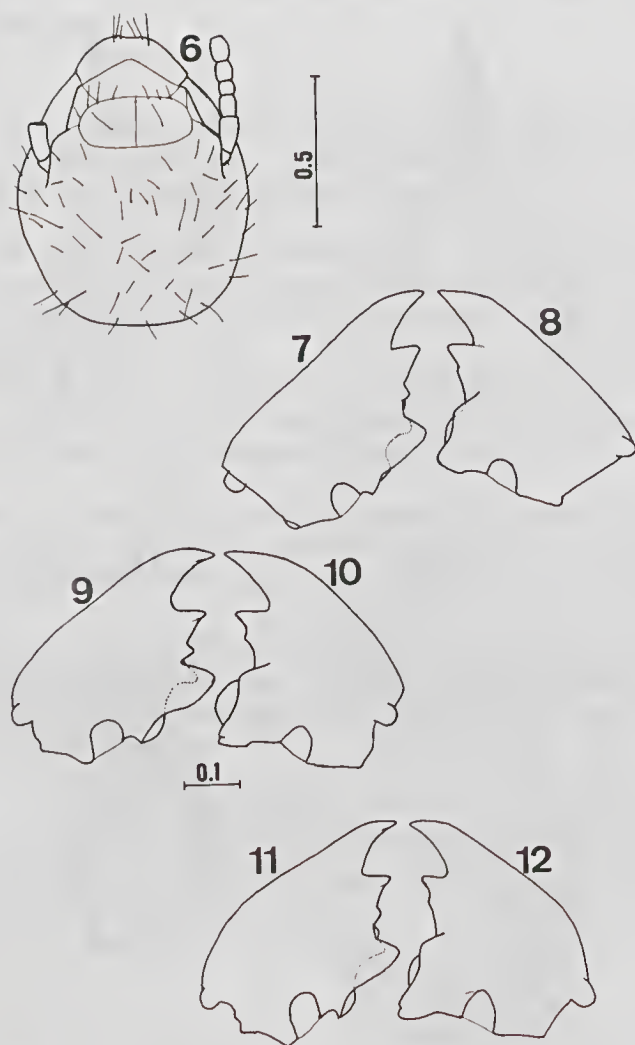
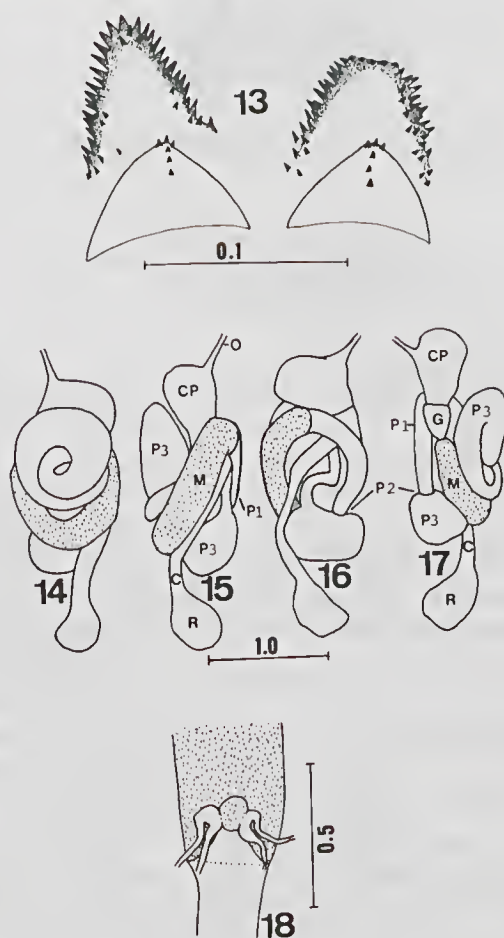

Figures 1-5

Ereymatermes rotundiceps, sp.n. 1. head of soldier, dorsal view; 2. head of soldier, profile; 3. head of alate, dorsal view; 4. pronotum of alate; 5. head alate, profile. Scale in millimeters.

Figures 6-12
Ereymatermes rotundiceps, sp.n. 6. head of worker; 7-8. mandibles of alate; 9-10. mandibles of worker with narrow gap; 11-12. mandibles of worker with broad gap. Scales in millimeters.

Figures 13-18

Ereymatermes rotundiceps, sp.n. Digestive tube of worker: 13. enteric valve armature (there are six equal swellings but only two are in the figure); 14. dorsal; 15. right; 16. ventral; 17. left; 18. mixed segment showing Malpighian tubules insertion. Scales in millimeters. O= oesophagus; CP= crop; G= gizzard; M= mesenteron; P1= first proctodeal segment; P2= enteric valve; P3= paunch; C= colon; R= rectum.

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